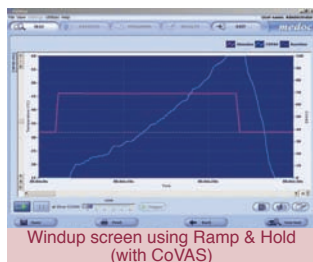
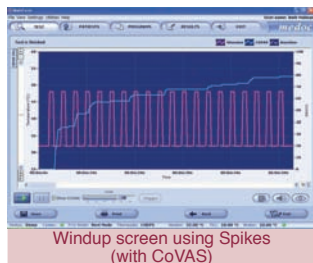


Evaluation of Temporal Summation (Pain Windup)

The **PATHWAY** Pain & Sensory Evaluation System is an advanced, computerized, thermal stimulator designed for neurological and pain research. Through rapid and precise thermal stimulation oscillation control, **PATHWAY** (CHEPS Model) enables the evaluation of Temporal Summation, providing unique information regarding central pain processing mechanisms related to central sensitization.

Temporal Summation can be an important component of a thermal sensory evaluation protocol:



- Exaggerated temporal summation (TS) of pain characterizes several chronic pain disorders, suggesting that mechanisms supporting TS may be involved in the onset or maintenance of clinical pain. Assessment of TS can help characterize the perceptual disturbances experienced by these patients.
- Temporal summation of pain is the most widely applicable quantitative sensory testing method that invokes neural mechanisms related to central sensitization. Central sensitization is believed to be an important determinant of many chronic pain conditions; therefore, technology/protocols that simulate such processes are particularly important.
- Temporal summation can be an important outcome measure in clinical trials. If a patient displays enhanced TS and if TS reflects some of the neurochemical processes underlying central sensitization, then effective treatments would be expected to reverse the condition.
- A temporal summation protocol can provide two separate indices of pain perception in a brief series of heat pulses. One index is TS itself, which is reflected in the degree of increase in pain ratings across a series of trials. The other index is an overall measure of pain sensitivity, which is reflected in the average rating collapsed across trials.

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